

OMI 2 Pole series

2 Pole Miniature Power PC Board Relay

Appliances, HVAC, Office Machines.

UL File No. E58304

CSA File No. LR48471

VDE File No. 6678

SEMKO File No. 9517235

Features

- Meet UL 508, VDE0435 and SEMKO requirements.
- 2 Form A and 2 Form C contact arrangements.
- Immersion cleanable, sealed version available.
- Meet 5,000V dielectric voltage between coil and contacts.
- Meet 10,000V surge voltage between coil and contacts (1.2 / 50µs).

Contact Data @ 20°C

Arrangements: 2 Form A (DPST-NO) and 2 Form C (DPDT).

Material: Ag Alloy.

Max. Switching Rate: 300 ops./min. (no load).
30 ops./min. (rated load).

Expected Mechanical Life: 10 million operations (no load).

Expected Electrical Life: 100,000 operations (rated load).

Minimum Load: 100mA @ 5VDC.

Initial Contact Resistance: 100 milliohms @ 1A, 6VDC.

Contact Ratings

Ratings: 5A @ 240VAC resistive,
5A @ 120VAC resistive,
5A @ 30VDC resistive,
1/8 HP @ 250VAC.

1.5A @ 240VAC inductive (cosφ = 0.4),
1.5A @ 120VAC inductive (cosφ = 0.4),
1.5A @ 24VDC inductive (L/R=7msec).

Max. Switched Voltage: AC: 240V.
DC: 30V.

Max. Switched Current: 5A.

Max. Switched Power: OMI: 1,200VA, 150W.

Initial Dielectric Strength

Between Open Contacts: 1,000VAC 50/60 Hz. (1 minute).

Between Coil and Contacts: 5,000VAC 50/60 Hz. (1 minute).

Surge Voltage Between Coil and Contacts: 10,000V (1.2 / 50µs).

Initial Insulation Resistance

Between Mutually Insulated Elements: 1,000M ohms min. @ 500VDCM.

Coil Data

Voltage: 3 to 48VDC.

Nominal Power: 720mW (OMI-D), 540mW (OMI-L).

Coil Temperature Rise: 45°C max., at rated coil voltage.

Max. Coil Power: 130% of nominal.

Duty Cycle: Continuous.

Coil Data @ 20°C

OMI-L Sensitive				
Rated Coil Voltage (VDC)	Nominal Current (mA)	Coil Resistance (ohms) ± 10%	Must Operate Voltage (VDC)	Must Release Voltage (VDC)
3	176.5	17	2.40	0.30
5	106.4	47	4.00	0.50
6	88.0	68	4.80	0.60
9	58.0	155	7.20	0.90
12	44.4	270	9.60	1.20
24	21.8	1,100	19.20	2.40
48	10.9	4,400	38.40	4.80

OMI-D Standard				
Rated Coil Voltage (VDC)	Nominal Current (mA)	Coil Resistance (ohms) ± 10%	Must Operate Voltage (VDC)	Must Release Voltage (VDC)
3	240.0	12.5	2.25	0.30
5	138.9	36	3.75	0.50
6	120.0	50	4.50	0.60
9	78.3	115	6.75	0.90
12	60.0	200	9.00	1.20
24	29.3	820	18.00	2.40
48	14.5	3,300	36.00	4.80

Operate Data

Must Operate Voltage:

OMI-D: 75% of nominal voltage or less.

OMI-L: 80 % of nominal voltage or less.

Must Release Voltage: 5% of nominal voltage or more.

Operate Time: OMI-D: 15 ms max.

OMI-L: 20 ms max.

Release Time: 8 ms max.

Environmental Data

Temperature Range:

Operating: OMI-D:

-30°C to +55°C

OMI-L:

-30°C to +70 °C

Vibration, Mechanical: 10 to 55 Hz., 1.5mm double amplitude

Operational: 10 to 55 Hz., 1.5mm double amplitude.

Shock, Mechanical: 1,000m/s² (100G approximately).

Operational: 100m/s² (10G approximately).

Operating Humidity: 20 to 85% RH. (Non-condensing).

Mechanical Data

Termination: Printed circuit terminals.

Enclosure (94V-0 Flammability Ratings):

OMI-SS: Vented (Flux-tight) plastic cover.

OMI-SH: Sealed plastic case.

Weight: 0.46 oz (13g) approximately.

Ordering Information

Typical Part Number ▶

OMI

-SS

-2

12

L

M

1. Basic Series:

OMI = 2 Pole Miniature Power PC Board Relay.

2. Enclosure:

SS = Vent (Flux-tight)* plastic cover.
SH = Sealed, plastic case.

3. Termination:

2 = 2 pole

4. Coil Voltage:

03 = 3VDC 06 = 6VDC 12 = 12VDC 48 = 48VDC
05 = 5VDC 09 = 9VDC 24 = 24VDC

5. Coil Input:

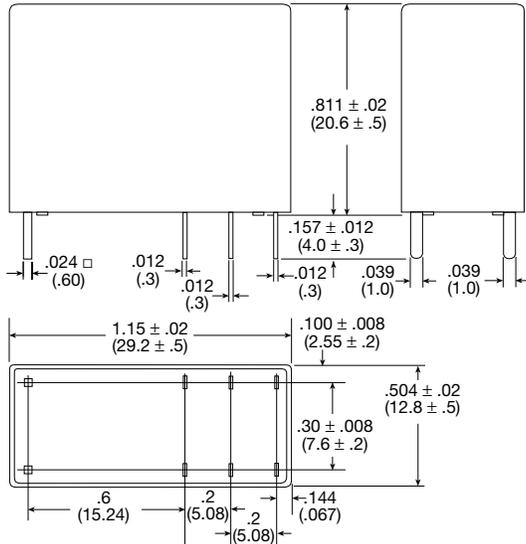
D = Standard (720mW) L = Sensitive (540mW)

6. Contact Arrangement:

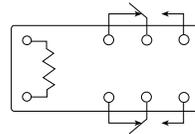
Blank = 2 Form C, DPDT M = 2 Form A, DPST-NO

* Not suitable for immersion cleaning processes.

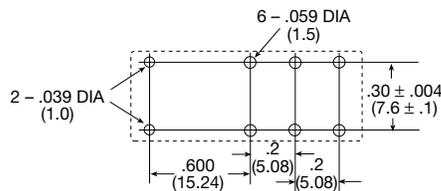
Outline Dimensions



Wiring Diagram (Bottom View)

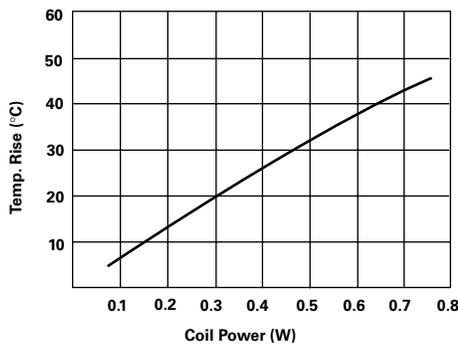


PC Board Layout (Bottom View)

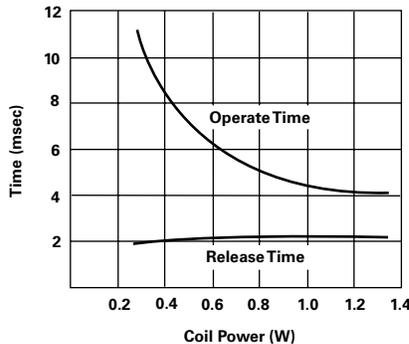


Reference Data

Coil Temperature Rise



Operate Time



Life Expectancy

